

REMARKS

In an Office Action mailed February 17, 2004, claims 1-6 and 8-24 were pending and all claims were rejected. The rejection was made final. An amendment after final was filed on March 5, 2004. An Advisory Action mailed April 5, 2004 informed Applicants that the proposed amendments were not entered. In response, Applicants are filing an RCE with this amendment in which claims 1, 8-10, 18, 21-23 are amended and new independent claim 25 is presented. Applicants request the allowance of claims 1-6 and 8-25, thereby placing the application in condition for allowance. A fee in the amount of \$86 for one independent claim in excess of three and an additional claim in excess of twenty not previously paid for is due and authorized on the first page. The Advisory Action noted that the proposed claim 8 amendment did not overcome the stated rejection in the prior action. Correction is herein provided.

Claim Rejections

Claims 8 and 18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Rejection of Claims 8 and 18 under 35 U.S.C 112, second paragraph

Claim 8 was rejected for reciting a first filter for providing a first filter output. Amended base claim 1 recites a first low pass filter and a second low pass filter as part of the recited means means for using the output signal that contains a sum of channel information and the output signal that contains a difference of channel information. Both claim 1 and claim 8 are herein amended to sequentially

reference the recited low pass filters to remove ambiguity. Applicants request the withdrawal of the rejection of claim 8 under 35 U.S.C. 112, second paragraph. It should be noted that in an alternative form, as recited in other claims, a common filter may be time multiplexed rather than implementing six distinct low pass filters as recited in base claim 1.

Claim 18 was rejected for the language associated with the recited pilot component and whether the pilot component has a reduced frequency in the recited intermediate signal or the input signal. Claim 18 is herein amended to make clear that the pilot component in the recited intermediate signal has a reduced frequency from the pilot component in the input signal. Therefore, Applicants request the withdrawal of the rejection of claim 18 under 35 U.S.C. 112, second paragraph.

Additionally, amendment to claim 23 is herein requested to improve the grammatical syntax of the claim by adding the word "of" immediately following the word "step". Approval of this matter related to form is requested.

The requested changes reduce the issues for consideration, and Applicants request the timely entrance of this amendment.

Rejection of Claims 1-6, 8-13, 16-19 and 21-24 under 35 U.S.C 103(a)

Claims 1-6, 8-13, 16-19 and 21-24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vogt et al. (U.S. Patent 5,442,709) in view of Reich (U.S. Patent 4,827,515), Gottfried et al. (U.S. Patent 5,671,286), and Short (U.S. Patent 5,068,896). In response, independent claims 1, 18 and 21 are herein amended to particularly recite that the dynamically controlled filters are separately controlled filters for separately varying bandwidth of the output signal containing a difference of the left channel information and the output signal containing a sum of the left

channel information and the right channel information. Amended claims 1 and 18 recite that the bandwidth of the filter processing the output signal containing a difference of the left channel information and the right channel information is varied prior to varying the bandwidth of the filter processing the output signal containing a sum of the left channel information and the right channel information. Amended claim 21 recites that bandwidth of the low pass filter that filters the output signal containing a sum of the left channel information and the right channel information is different from bandwidth of the low pass filter that filters the output signal containing a difference of the left channel information and the right channel information.

Short was cited for the proposition of separately filtering the sum (L+R) and difference (L-R) signals in an FM stereo decoder using dynamic filters. However, as illustrated in FIG. 2 of Short, a same control signal 26 is used to control each filter. As stated in Short at Col. 3, lines 48-55, the control signal generator 22 controls the cutoff frequencies of the all-pass filter 31 and the low pass filter 21 to be the same so that both filters have the same Q and the phase shift introduced by both filters is substantially the same to maintain good stereo separation. In contrast, as taught by Applicants at page 16, lines 2-4, "Low pass filters 410 and 430 each has a dynamic bandwidth that varies depending upon the received signal condition." Applicants' separate bandwidth filter control is taught to be needed at page 16, lines 10-12 because the filter processing the (L-R) signal needs to be adjusted first because the (L-R) is more easily corrupted and has been shifted from high frequency. As a result, as taught at page 17, lines 4-5, different coefficients are used by the low pass filters processing the (L+R) and the (L-R) signals to implement different bandwidths. Short does not teach or suggest such dynamic bandwidth control of filters when combining (L-R) and (L+R) components to generate a left channel and a right channel signal. No other reference of record

teaches or suggests the recited decoder and method of claims 1, 18 and 21.

Therefore, Applicants respectfully request the entrance of this amendment to place the application in condition for allowance.

Rejection of Claims 14, 15, 19 and 20 under 35 U.S.C 103(a)

Claims 14, 15, 19 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vogt et al. (U.S. Patent 5,442,709) in view of Reich (U.S. Patent 4,827,515), Gottfried et al. (U.S. Patent 5,671,286) and Short (U.S. Patent 5,068,896), and further in view of Patel et al. (U.S. Patent 5,479,449) and Whikehart et al. (U.S. Patent 5,936,438).

The addition of Patel and Whikehart to the basis of the rejection does not teach or suggest the claim recitals described above in connection with the amended base claims. For that reason, dependent claims 14, 15, 19 and 20, are allowable when considered in light of the amended base claims. Applicants respectfully request the withdrawal of the rejection of this rejection basis.

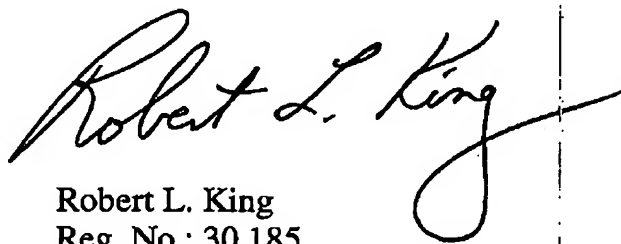
New independent claim 25 is presented. Claim 24 is distinguishable from the art of record. For example, the prior art does not teach or suggest a decoder having a "means comprising first and second dynamically and separately controlled low pass filters, the first low pass filter processing the output signal that contains a sum of left channel information and right channel information and having its bandwidth varied after first varying bandwidth of the second low pass filter that processes the output signal containing a difference of left channel information and right channel information, an amount of bandwidth adjustment depending upon received signal conditions". Applicants request the consideration of and allowance of claim 25.

In view of the remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. No amendment made herein is related to the statutory requirements of patentability unless

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expressly stated herein. Further, no amendment herein is made for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references. In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned at (512) 996-6839.

Respectfully submitted,



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